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EXAMINER

KLING, CHARLES

ART UNIT	PAPER NUMBER
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1711

NOTIFICATION DATE	DELIVERY MODE
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04/05/2010

ELECTRONIC

Please find below and/or attached an Office communication concerning this application or proceeding.

The time period for reply, if any, is set in the attached communication.

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Office Action Summary	Application No. 10/581,245	Applicant(s) SCHERINGER ET AL.	
	Examiner Charles W. Kling	Art Unit 1711	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 28 January 2010.
- 2a) ☒ This action is **FINAL**. 2b) ☐ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-16 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 1-16 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 28 January 2010 is/are: a) ☒ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☒ All b) ☐ Some * c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
 2. ☐ Certified copies of the priority documents have been received in Application No. _____.
 3. ☒ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- | | |
|---|---|
| 1) <input type="checkbox"/> Notice of References Cited (PTO-892) | 4) <input type="checkbox"/> Interview Summary (PTO-413) |
| 2) <input type="checkbox"/> Notice of Draftperson's Patent Drawing Review (PTO-948) | Paper No(s)/Mail Date. _____ |
| 3) <input type="checkbox"/> Information Disclosure Statement(s) (PTO/SB/08) | 5) <input type="checkbox"/> Notice of Informal Patent Application |
| Paper No(s)/Mail Date _____ | 6) <input type="checkbox"/> Other: _____ |

DETAILED ACTION

1. This action is in response to applicant's amendments and arguments received 01-28-10.
2. Claims **1-16** are pending.
3. Claims **1-14** were rejected in the previous action.
4. Claims **1, 15-16** were objected to in the previous action.

Response to Amendments

Drawings

5. Examiner acknowledges applicant's amendment to the drawings. The replacement sheet(s) depicting figure 2 is accepted by the examiner. It has been determined that no new matter has been entered.

Specification

6. Examiner acknowledges applicant's amendment to pages 7, 12 of the specification. It has been determined that no new matter has been entered.
7. The objection to the drawings in the previous action is hereby withdrawn.

Claim Objections

8. Examiner acknowledges applicant's amendment to claims **1, 15-16**. It has been determined that no new matter has been entered.

Art Unit: 1711

9. The objections to claims **1, 15-16**, stated in the previous action are hereby withdrawn.

Claim Rejections - 35 USC § 112, 2nd paragraph

10. Examiner acknowledges applicant's amendment to claims **7, 10, 14**. It has been determined that no new matter has been entered.

11. The rejections of claims **7, 10, 14** under 35 USC 112, 2nd paragraph, stated in the previous action are hereby withdrawn.

Other Amendments

12. Examiner acknowledges applicant's amendments to claims **1-16**, removing element numbers from these claims. It has been determined that no new matter has been entered.

Response to Arguments

Claim Rejections - 35 USC § 112, 1st paragraph

13. Regarding claims **1-14**, applicant contends that the disclosure does enable the invention as claimed and specifically states that USPTO rules and regulations do not require working drawings, production specifications, and/or working models/examples of the claimed invention.

14. This argument has been fully considered and is found persuasive.

Art Unit: 1711

15. As such, the rejection of claims **1-14** under 35 USC 112, 1st paragraph, stated in the previous action is hereby withdrawn.

Response to Arguments

Claim Rejections - 35 USC § 103

16. Regarding claims **1-2, 7-9, 11**, applicant contends that the secondary reference, METZGER, is not analogous art and as such it would not be obvious to combine this reference with the primary reference, EBERHARDT.

17. This argument has been fully considered but it is not persuasive.

18. It has been held that a prior art reference must either be in the field of applicant's endeavor or, if not, then be reasonably pertinent to the particular problem with which the applicant was concerned, in order to be relied upon as a basis for rejection of the claimed invention. See *In re Oetiker*, 977 F.2d 1443, 24 USPQ2d 1443 (Fed. Cir. 1992). In this case, METZGER is concerned with the problem of drying a substrate which is reasonably pertinent to the dish drying problem concerning the applicant.

19. Additionally, applicant contends that the apparatus of the primary reference would not perform as intended if modified by the teachings of the secondary reference.

20. This argument has been fully considered but it is not persuasive.

21. Adding counter-flow air circulation to the dishwasher of EBERHARDT would not prevent this dishwasher from fulfilling its stated purpose of washing dishes, as none of the washing processes of EBERHARDT would be substantially affected by this air circulation.

Art Unit: 1711

22. As such, claims 1-2, 7-9, 11 stand rejected, as stated below and in the previous action.

23. Regarding claims **3-4, 6, 12-13**, applicant contends that the cited reference, FRATELLO ET AL., is not analogous art and as such it would not be obvious to combine this reference with the cited references, EBERHARDT and METZGER.

24. This argument has been fully considered but it is not persuasive. FRATELLO ET AL. is concerned with the problem of drying a vehicle, which is reasonably pertinent to the dish drying problem concerning the applicant.

25. Further, applicant contends that a combination of these references would not meet the requirements of the applicant's claims.

26. This argument has been fully considered but it is not persuasive.

27. FRATELLO ET AL. teaches a controllable, pneumatically actuated, movable air nozzle. One of ordinary skill in the art at the time of the invention would have been able to apply the teachings of FRATELLO ET AL. to an air nozzle of a dishwasher, since changing the size of a component is generally recognized as being within the level of ordinary skill in the art. See *In re Rose*, 105 USPQ 237 (CCPA 1955).

28. As such, claims 3-4, 6, 12-13 stand rejected, as stated below and in the previous action.

29. Regarding claim **5** applicant contends that this dependent claim is allowable based on the argument that claim 4, from which it depends, is allowable.

30. This argument has been fully considered but it is not persuasive.

Art Unit: 1711

31. As stated above, applicant's arguments regarding claim 4 are not persuasive. As such, claim 5 stands rejected, as stated below and in the previous action.

32. Regarding claims **10, 14**, applicant contends that these dependent claims are allowable based on the argument that the independent claim is allowable.

33. This argument has been fully considered but it is not persuasive.

34. As stated above, applicant's arguments regarding independent claim 1 are not persuasive. As such, claims 10, 14 stand rejected, as stated below and in the previous action.

35. Applicant has amended claims **15-16** to remove improper multiple dependencies.

36. Regarding amended claims 15-16, applicant contends that these claims are ready for examination.

37. This argument has been fully considered and is found persuasive.

38. Applicant's amendment has necessitated a new ground of rejection for claims 15-16, as stated below.

Claim Rejections - 35 USC § 103

39. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

40. The elements of the claims, when recited in this action, are anticipated, disclosed, and/or taught by the relevant prior art as cited in parenthesis and bold type.

41. Claims 1-2, 7-9, 11 are rejected under 35 U.S.C. 103(a) as being unpatentable over EBERHARDT (US-4,561,904) in view of METZGER (US-4,336,279).

42. With regard to claim 1, EBERHARDT teaches:

A conveyor dishwasher (**...a conveyor-type dishwasher...lines 1-2 of abstract**) having at least one washing zone (**element 56 of figure 1**), at least one rinsing zone (**element 76 of figure 1**), a drying zone (**element 108 of figure 1**), a suction-extraction location (**element 120 of figure 1**) for an exhaust-air stream (**exhaust stream shown as arrow inside element 120 in figure 1**) and a transporting device (**element 24 of figure 1**) for conveying wash ware in the transporting direction through the conveyor dishwasher (**conveyor operation discussed in lines 29-31 of column 5**), characterized in that the exhaust-air stream is produced [in] the dishwasher counter to the transporting direction of the wash ware through the dishwasher by regulated action on flow from the drying zone and/or the washing zone.

43. EBERHARDT does not appear to explicitly/expressly disclose the exhaust air stream moving counter to the direction of the conveyor, where said stream is produced by regulated action in the drying and/or washing zone.

44. However, METZGER discloses a substrate drying apparatus (element 10 of figure 1) where the exhaust stream (air flow shown by arrow B and multiple internal arrows in figure 1), flows counter to the direction of the conveyor (conveyor direction

Art Unit: 1711

shown by arrow A in figure 1). Said stream is regulated by the action of a motor driven fan (**element 28 of figure 1**) and a controllable damper (**damper action discussed in lines 36-40 of column 3**).

45. At the time of the invention, it would have been *prima facie* obvious to one having ordinary skill in the art to modify the dishwasher of EBERHARDT to include the regulated counter exhaust stream of METZGER, since air flow moving counter to the conveyor serves to move air containing volatiles (such as water vapor) from areas of lower volatile concentration towards areas of higher volatile concentration, which facilitates increased drying action, as taught by METZGER (**lines 29-44 of column 3**).

46. With regard to claim **2**, METZGER teaches:

The conveyor dishwasher as claimed in claim 1, characterized in that the suction-extraction location (**exhaust duct, element 26 of figure 1**) for extracting the exhaust-air stream by suction (**suction created by motor driven fan, element 28 of figure 1**) is arranged in the region of an inlet (**exhaust duct shown near the region of the inlet in figure 1**) of the dishwasher.

47. With regard to claim **7**, EBERHARDT teaches:

The conveyor dishwasher as claimed in claim 1, characterized in that a deflecting surface (**element 118 of figure 1**) is accommodated in the region of the drying zone, beneath the exit nozzles (**deflecting surface shown beneath drying fan in figure 1**).

48. With regard to claim **8**, EBERHARDT teaches:

The conveyor dishwasher as claimed in claim 7, characterized in that the deflecting surface is of essentially horizontal design (**center of element 118 shown as**

Art Unit: 1711

horizontal in figure 1) and runs beneath the device for transporting the wash ware **(element 118 shown below conveyor, element 24, in figure 1).**

49. With regard to claim 9, EBERHARDT teaches:

The conveyor dishwasher as claimed in claim 1, characterized in that the drying zone **(element 108 of figure 1)** is assigned a separating curtain **(element 122 of figure 1)** on the outlet side **(curtain shown on outlet side in figure 1)**, as seen in the transporting direction of the wash ware, and this separating curtain bounds an intake opening via which an external-air stream can be taken into the drying zone **(Air would be able to flow around the perimeter of the curtain, especially when the items being washed are moving through the curtain as described in the lines 39-41 of column 6).**

50. **(Additionally, METZGER discloses an air intake, arrows B of figure 1, on the outlet side, which allows air flow into the drying zone.)**

51. With regard to claim 11, METZGER teaches:

The conveyor dishwasher as claimed in claim 1, characterized in that the exhaust-air stream which is extracted via the suction-extraction location **(exhaust duct damper which exhausts to atmosphere discussed in lines 36-40 of column 3)** corresponds to the external-air streams which are taken in via the intake openings **(External air streams and intake openings shown near left-most arrow A and arrows B of figure 1. Corresponding mass of exhaust and intake is inherent in the movement of a gas into and out of an enclosed space.).**

Art Unit: 1711

52. Claims **3-4, 6, 12-13** are rejected under 35 U.S.C. 103(a) as being unpatentable over EBERHARDT and METZGER as applied to claim 1 above, and further in view of FRATELLO ET AL. (US PG-Pub 2003/0233767).

53. EBERHARDT and METZGER disclose the elements of claim 1 (see 103(a) rejection above).

54. With regard to claim **3**, EBERHARDT teaches:

The conveyor dishwasher as claimed in claim 1, characterized in that a drying fan (**element 114 of figure 1**) is arranged in the drying zone (**element 108 of figure 1**) and has pivotally designed exit nozzles assigned to it.

55. EBERHARDT and METZGER do not appear to explicitly/expressly disclose the drying fan including pivotally designed exit nozzles.

56. However, FRATELLO ET AL. discloses a blower dryer for a carwash which includes a drying fan with a rotatable nozzle (**abstract**).

57. At the time of the invention, it would have been *prima facie* obvious to one having ordinary skill in the art to modify the dishwasher of EBERHARDT and METZGER to include the drying fan with rotatable nozzle of FRATELLO ET AL., since the directed nozzle serves to better push liquid particles toward the side or end of items being washed, thus enhancing the drying process as taught by FRATELLO ET AL. (**abstract**).

58. With regard to claim **4**, FRATELLO ET AL. teaches:

The conveyor dishwasher as claimed in claim 3, characterized in that volumes of exhaust air passing out of the drying zone are dependent on the position of the exit nozzles (**The volume of air leaving the drying zone of the carwash would be**

Art Unit: 1711

dependent on the position of the nozzles. If the nozzles were directed straight towards the exit, as shown in figure 10, then large volumes of air would be caused to exit the drying zone. However, if the nozzles were positioned more perpendicular to the exit, as shown in figure 11, then more air would be recirculated by the fans and therefore, less air would be caused to exit the drying zone.).

59. With regard to claim **6**, FRATELLO ET AL. teaches:

The conveyor dishwasher as claimed in claim 4, characterized in that a second quantity of air which can be channeled away out of the drying zone can be varied in dependence on the pivoting position of the exit nozzles of the drying fan **(The volume of air leaving the drying zone of the carwash would be dependent on the position of the rotating nozzles. If the nozzles were directed straight towards the exit, as shown in figure 10, then large volumes of air would be caused to exit the drying zone. However, if the nozzles were positioned more perpendicular to the exit, as shown in figure 11, then more air would be recirculated by the fans and therefore, less air would be caused to exit the drying zone.).**

60. With regard to claim **12**, FRATELLO ET AL. teaches:

The conveyor dishwasher as claimed in claim 4, characterized in that the exit nozzles within the drying zone can be adjusted by electromotive, pneumatic **(...pneumatic actuator...line 6 of paragraph [0033])** or hydraulic means or mechanically via levers **(rotating action of the exit nozzles, by the pneumatic actuator, discussed in paragraph [0033]).**

61. With regard to claim **13**, FRATELLO ET AL. teaches:

The conveyor dishwasher as claimed in claim 1, characterized in that the exit nozzles can be adjusted in the pivoting direction during operation of the conveyor dishwasher **(controlled operation of nozzle adjustment, during washing operation, discussed in paragraph [0037])**.

62. Claim **5** is rejected under 35 U.S.C. 103(a) as being unpatentable over EBERHARDT, METZGER and FRATELLO ET AL. as applied to claim 4 above, and further in view of WEIHE (US-3,598,131).

63. EBERHARDT, METZGER and FRATELLO ET AL. disclose the elements of claim 4 (see 103(a) rejection above).

64. EBERHARDT, METZGER and FRATELLO ET AL. do not appear to explicitly/expressly disclose the dishwasher being operated without clouds of steam at the inlet and outlet.

65. However, WEIHE discloses two steam collection systems for a dishwasher which prevent clouds of steam from being ejected at the inlet and outlet by pulling the steam into the heat recovery systems **(lines 6-14 of column 3)**.

66. At the time of the invention, it would have been *prima facie* obvious to one having ordinary skill in the art to modify the dishwasher of EBERHARDT, METZGER and FRATELLO ET AL. to include the steam collection systems of WEIHE, since these devices recover the heat of condensation and reduce the humidity in the dishwasher room, as taught by WEIHE **(abstract)**.

67. Claim **10** is rejected under 35 U.S.C. 103(a) as being unpatentable over EBERHARDT and METZGER as applied to claim 1 above, and further in view of WEIHE.

68. EBERHARDT and METZGER disclose the elements of claim 1 (see 103(a) rejection above).

69. EBERHARDT and METZGER do not appear to explicitly/expressly disclose a fan on a heat recovery device, the capacity of which is dependent on the amount of air channeled out of the drying zone.

70. However, WEIBE discloses a steam collection system for a dishwasher which includes two fans (**element 80 of figure 1**) of two heat recovery devices (**elements 64, 65 of figure 1**) where the capacity of the fans is dependent on the amount of air channeled out of the dishwasher.

71. At the time of the invention, it would have been *prima facie* obvious to one having ordinary skill in the art to modify the dishwasher of EBERHARDT and METZGER to include the fan of the heat recovery device of WEIHE, since these devices recover the heat of condensation and reduce the humidity in the dishwasher room, as taught by WEIHE (**abstract**).

72. Claim **14** is rejected under 35 U.S.C. 103(a) as being unpatentable over EBERHARDT, METZGER, and WEIHE as applied to claim 10 above, and further in view of ANDERSSON (SE-9,503,485).

Art Unit: 1711

73. EBERHARDT and METZGER disclose the elements of claim 1 (see 103(a) rejection above).

74. EBERHARDT, METZGER, and WEIHE do not appear to explicitly/expressly disclose the use of a speed-regulated fan to control the exhaust stream of the heat recovery device.

75. However, ANDERSSON discloses a ventilation control system which utilizes a speed-regulated fan (**abstract**).

76. At the time of the invention, it would have been *prima facie* obvious to one having ordinary skill in the art to modify the heat recovery device of EBERHARDT, METZGER, and WEIHE to include the speed-regulated fan of ANDERSSON, since all the claimed elements were known in the prior art and one skilled in the art, at the time of the invention, could have combined the elements as claimed by known methods with no change in their respective functions, and the combination would have yielded predictable results.

Claim Rejections - 35 USC § 112

77. The following is a quotation of the second paragraph of 35 U.S.C. 112:

The specification shall conclude with one or more claims particularly pointing out and distinctly claiming the subject matter which the applicant regards as his invention.

78. Claims **15-16** are rejected under 35 U.S.C. 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention.

Art Unit: 1711

79. Claim **15** recites the limitations "the position", and "the exit nozzles" in line 2, as well as "the capacity", "the fan", and "the heat-recovery device" in lines 2-3. There is insufficient antecedent basis for these limitations in the claim.

80. Claim **16** recites the limitations "the manipulated-variable position", and "the exit nozzles" in line 2, as well as "the capacity", "the drive", and "the fan" in lines 2-3. There is insufficient antecedent basis for these limitations in the claim.

Claim Rejections - 35 USC § 103

81. Claims **15-16** are rejected under 35 U.S.C. 103(a) as being unpatentable over EBERHARDT and METZGER as applied to claims 1-2, 7-9, 11 above, and further in view of ROBINSON (US 3,896,827).

82. EBERHARDT and METZGER disclose the elements of claim 1 (see 103(a) rejection above).

83. EBERHARDT and METZGER do not appear to explicitly/expressly disclose a fan or air nozzles being controlled based on a sensed temperature, moisture content, or presence of wash ware.

84. However, ROBINSON discloses a dishwashing machine that senses the presence of dishes, water temperature, water pressure, and detergent concentration to control the washing process (**abstract, lines 1-35 of column 2**).

85. At the time of the invention, it would have been *prima facie* obvious to one having ordinary skill in the art to modify the dishwasher of EBERHARDT and METZGER to apply the control teachings of ROBINSON to a fan or air nozzle, since one of skill in the

Art Unit: 1711

art at the time of the invention would have known that the use of automatic control, in response to sensor or user input, was commonly used in the dishwasher art to control washing, rinsing, sanitizing, and drying processes.

Conclusion

86. The objections to the drawings and claims, stated in the previous action, are hereby withdrawn.

87. The claim rejections under 35 USC 112, stated in the previous action, are hereby withdrawn. However claims **15-16** stand newly rejected under 35 USC 112, 2nd paragraph, as stated above.

88. Applicant's arguments received 01-28-10 have been fully considered but they are not persuasive.

89. Claims **1-16** stand rejected under 35 USC 103(a), as stated above and in the previous action, these rejections are hereby made FINAL.

90. Applicant's amendment necessitated the new ground(s) of rejection presented in this Office action. Accordingly, **THIS ACTION IS MADE FINAL**. See MPEP § 706.07(a). Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

91. A shortened statutory period for reply to this final action is set to expire THREE MONTHS from the mailing date of this action. In the event a first reply is filed within TWO MONTHS of the mailing date of this final action and the advisory action is not

Art Unit: 1711

mailed until after the end of the THREE-MONTH shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than SIX MONTHS from the mailing date of this final action.

92. Any inquiry concerning this communication or earlier communications from the examiner should be directed to CHARLES W. KLING whose telephone number is 571-270-5524. The examiner can normally be reached on Monday through Friday 8:00 - 4:30 EST.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Michael E. Barr can be reached at 571-272-1414. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

Application/Control Number: 10/581,245
Art Unit: 1711

Page 18

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Examiner, Art Unit 1711

/Michael Barr/
Supervisory Patent Examiner, Art
Unit 1711